

I CLAIM:

1. A system for redistributing a plurality of audio/video and data signals over conductors, comprising
a server, and
a redistributor for receiving a plurality of input signals, comprising
for each input signal, a demodulator for demodulating the signal,
the server controlling an output channel selection of the input
signal responsive to one or more control signals input into a
communications interface,

wherein the redistributor dynamically selects and allocates a redistribution
frequency suitable for each output signal based on one or more of: attenuation due to
interference from other sources, attenuation due to cable length, signal loss, signal-to-
noise ratio, data density of the output signal and signal sharing with other output signals.
2. The system of claim 1 in which the redistributor further selects a
modulation technique for the output signal.
3. The system of claim 1 in which the server records subscriber usage
information for designated output signals.
4. The system of claim 3 in which the server comprises software for
invoicing subscribers based on usage of designated output signals over a specified period.
5. The system of claim 1 in which the output of the redistributor is
transmitted to the communications interface over one or more twisted pairs of a telephone
wire.
6. The system of claim 5 in which the one or more control signals are
transmitted to the redistributor over a twisted pair of a telephone wire which carries a
telephone signal, the one or more control signals being modulated at a frequency which
does not interfere with the telephone signal.

7. The system of claim 1 in which the communications interface includes an optical interface for receiving the one or more control signals from an infrared remote control device.

8. The system of claim 1 in which the communications interface includes a data interface for receiving data from a keyboard, joystick, card reader, bar code reader or other data providing device.

9. The system of claim 1 in which the communications interface modulates the output of the redistributor to a selected channel or channels of the receiving device.

10. The system of claim 9 in which the output signal comprises a plurality of superposed signals, whereby each of a plurality of communications interfaces within a single subscriber premises is tuned to a different frequency so as to transmit to its associated receiver one of the superposed signals.

11. A method of redistributing a plurality of audio/video and data signals to a plurality of communications interfaces over conductors, comprising the steps of

- (a) receiving a plurality of input signals at a signal redistributor,
- (b) demodulating each input signal,
- (c) processing each input signal to a format suitable for switching,
- (d) switching an output of the redistributor according to one or more control signals input into a communications interface,
- (e) selecting and allocating a redistribution frequency suitable for the output signal based on one or more of: attenuation due to interference from other sources, attenuation due to cable length, signal loss, signal-to-noise ratio, data density of the output signal and signal sharing with other output signals, and
- (f) routing the output of the redistributor to the communications interface for transmission to a receiving device.

12. The method of claim 11 including the step of selecting a modulation technique for the output signal.

13. The method of claim 11 in which the server records subscriber usage information for designated output signals.
14. The method of claim 13 in which the server comprises software for invoicing subscribers based on usage of designated output signals over a specified period.
15. The method of claim 11 in which the output of the redistributor is transmitted to the communications interface over one or more twisted pairs of a telephone wire.
16. The method of claim 15 in which the one or more control signals are transmitted to the redistributor over a twisted pair of a telephone wire which carries a telephone signal, the one or more control signals being modulated at a frequency which does not interfere with the telephone signal.
17. The method of claim 11 in which the communications interface includes an optical interface for receiving the one or more control signals from an infrared remote control device.
18. The method of claim 11 in which the communications interface modulates the output of the redistributor to a selected channel or channels of the receiving device.
19. The method of claim 18 in which the output signal comprises a plurality of superposed signals, including the step of tuning each of a plurality of communications interfaces within a single subscriber premises to a different frequency so as to transmit to its associated receiver one of the superposed signals.
20. The method of claim 11 in which the step of processing each input signal to a format suitable for switching comprises matching the impedance of the demodulated input signal to the output impedance of the redistributor, raising the baseband of the demodulated input signal, equalizing the high frequency components and increasing the level of chroma of the demodulated input signal, and increasing the peak-to-peak voltage of the demodulated input signal.